

# Chapter 20: Effects

Effects simplifies platform specific customizations. When there is a need to modify a Xamarin Forms Control's properties, Effects can be used. When there is a need to override the Xamarin Forms Control's methods, Custom renderers can be used

## Section 20.1: Adding platform specific Effect for an Entry control

1. Create a new Xamarin Forms app using PCL File -> New Solution -> Multiplatform App -> Xamarin Forms -> Forms App; Name the project as EffectsDemo
2. Under the iOS project, add a new Effect class that inherits from PlatformEffect class and overrides the methods OnAttached, OnDetached and OnElementPropertyChanged Notice the two attributes ResolutionGroupName and ExportEffect, these are required for consuming this effect from the PCL/shared project.
  - OnAttached is the method where the logic for customization goes in
  - OnDetached is the method where the clean up and de-registering happens
  - OnElementPropertyChanged is the method which gets triggered upon property changes of different elements. To identify the right property, check for the exact property change and add your logic. In this example, OnFocus will give the Blue color and OutofFocus will give Red Color

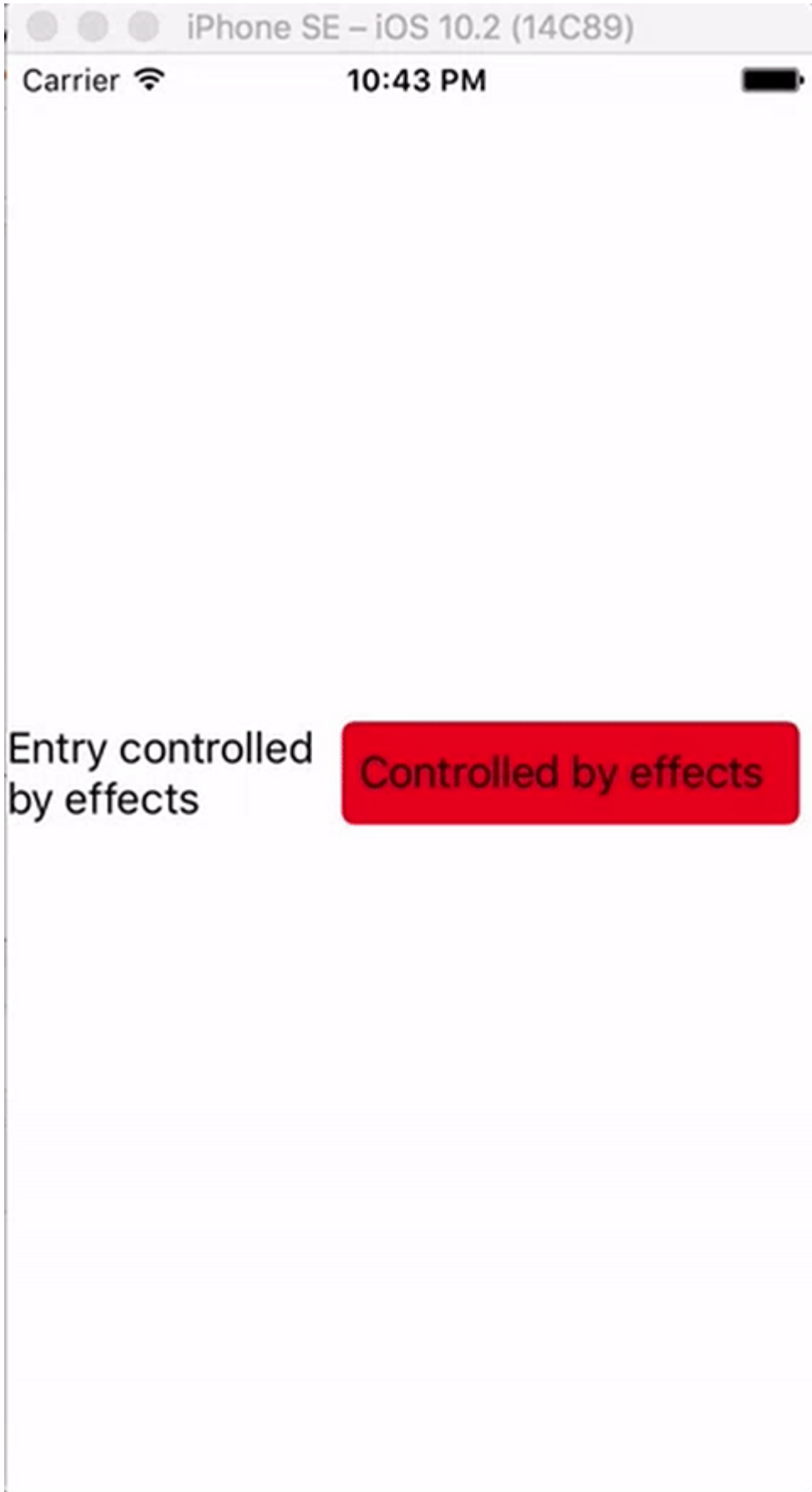
```
using System;
using EffectsDemo.iOS;
using UIKit;
using Xamarin.Forms;
using Xamarin.Forms.Platform.iOS;

[assembly: ResolutionGroupName("xhackers")]
[assembly: ExportEffect(typeof(FocusEffect), "FocusEffect")]
namespace EffectsDemo.iOS
{
    public class FocusEffect : PlatformEffect
    {
        public FocusEffect()
        {
        }
        UIColor backgroundColor;
        protected override void OnAttached()
        {
            try
            {
                Control.BackgroundColor = backgroundColor = UIColor.Red;
            }
            catch (Exception ex)
            {
                Console.WriteLine("Cannot set attacked property" + ex.Message);
            }
        }

        protected override void OnDetached()
        {
            throw new NotImplementedException();
        }
    }
}
```

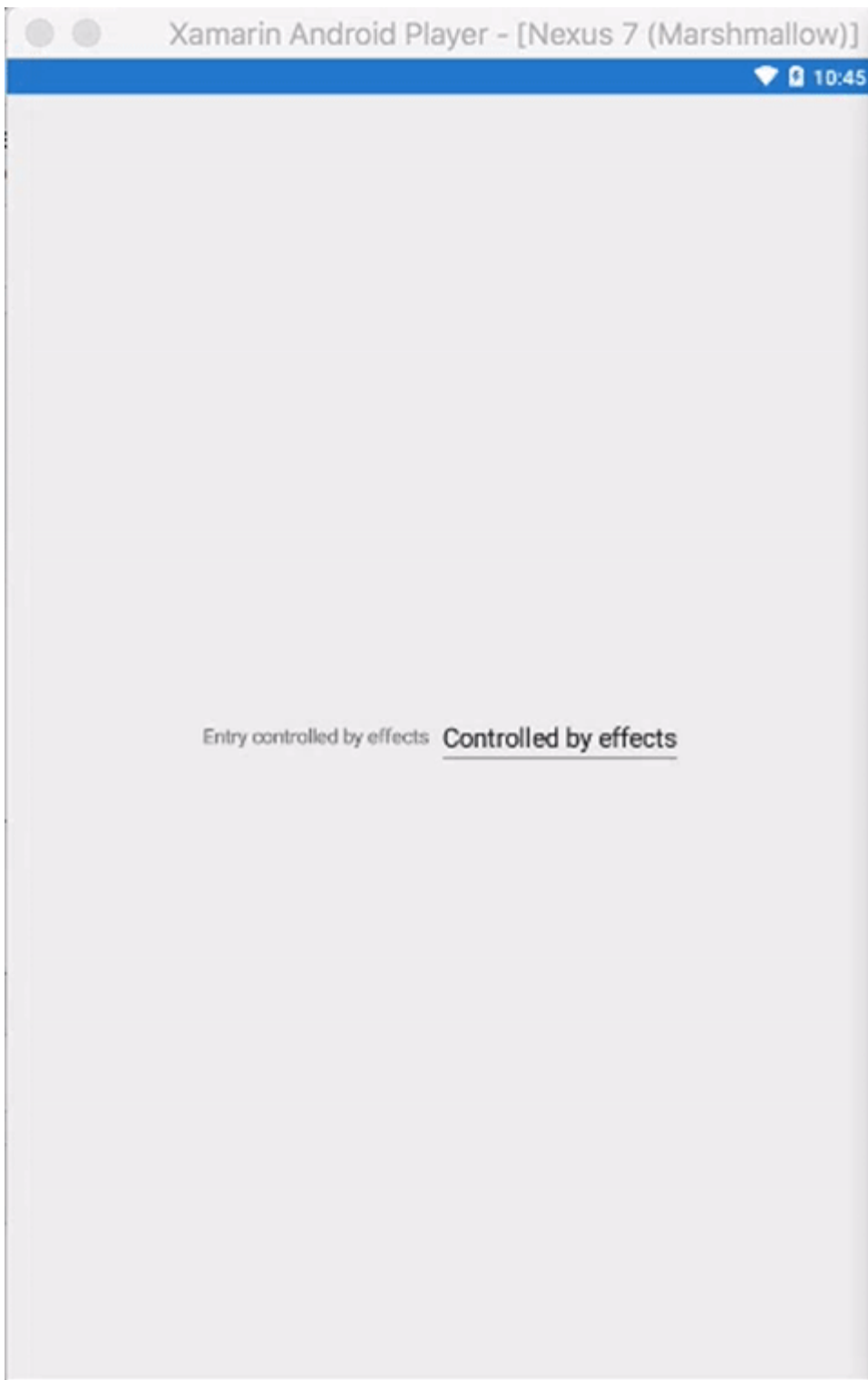


```
</StackLayout>  
</ContentPage>
```



Entry controlled  
by effects

Controlled by effects



Since the Effect was implemented only in iOS version, when the app runs in iOS Simulator upon focusing the Entry background color changes and nothing happens in Android Emulator as the Effect wasn't created under Droid project

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